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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,520	11/19/2003	Toru Kasai	032074	4686
38834	7590	06/01/2006	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			AN, SANG WOOK	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/715,520	Applicant(s) KASAI ET AL.	
	Examiner Sang W. An	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/21/04, 11/19/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasai et al (20020000295) in view of Universal Moulded Fiber Glass Corp (GB 1044031) and Watanabe et al (4673541).

Regarding claim 1, Kasai et al teach a method for continuously molding a fiber reinforced plastic (FRP) member utilizing a core having a shape corresponding to the shape of the member (fig 2, 10), the method comprising: a step of feeding a release film deformed in advance to correspond to the shape of the molded member (par 0023); a step of feeding plural sheets of semi-cured prepreg material formed by impregnating

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carbon fiber or glass fiber with thermosetting resin (par 0026); a step of laminating and deforming the prepreg into a predetermined shape to form a prepreg laminated body (par 0028); a step of hot-pressing the laminated and deformed release film and the prepreg laminated body into a predetermined shape (par 0028); and a step of post-curing the laminated body exiting the hot-pressing step by heating the same (par 0038) and puller (fig 1, 130) but does not teach the FRP member having a curvature and that the hot-pressing step is performed while pullers disposed before and after the hot-pressing step for gripping the laminated body and introducing the same into the hot press is used to prevent tension from being placed on the fiber in the prepreg.

However, Universal Moulded Fiber Glass Corp. teaches a FRP with a curvature (fig 6). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the curvature teaching in Kasai et al's method of making FRP in order to make an FRP that would meet a desired structural requirement such as an arch.

Furthermore, Watanabe et al teach two pulling device which can synchronously move with the mandrel in order to prevent excessive tension which can result in breakage of the brittle carbon (col 6 lines 59-68). Although Watanabe does not establish that the pullers are disposed before and after the hot-pressing/heating step, the examiner asserts that this is an obvious variation of the Watanabe's embodiment. The applicant should establish the criticality of placing the pullers before and after the hot-pressing step. Therefore it would have been obvious to one of ordinary skill in the

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art to use Watanabe et al's teaching in Kasai et al's method of producing a FRP member in order to prevent breakage of brittle carbon (col 6 lines 66-68).

Regarding claim 2, Kasai et al do not teach that during the step of deforming the prepreg into a shape with a curvature, the width of the prepreg is adjusted so that the angle of meandering of the fiber in the longitudinal direction is 5 degrees or smaller. However, Watanabe teach that an angle for winding the tape may be arbitrarily selected in accordance with a width of the prepreg tape (col 6 lines 62-65) and that this angle is between 4 to 6 (col 7 lines 57-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Watanabe et al's teaching in Kasai et al's method of producing a FRP member in order to prevent breakage of brittle carbon by bending (col 7 line 57-62).

Response to Argument

Applicants argue that Ohtake et al do not teach that the release film is deformed to correspond to the curvature of a mold member as claimed. Applicant's arguments, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kasai et al (20020000295).

Applicants argue that Watannabe et al do not disclose putting pullers before and after bobbins 13. The examiner agrees with this argument. However, the examiner asserts that this is an obvious variation of the Watanabe's embodiment. The applicant

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should establish the criticality of placing the pullers before and after the hot-pressing step.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 9 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sang Wook An
Patent Examiner
Art Unit 1732


CHRISTINA JOHNSON
PRIMARY EXAMINER

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May 22, 2006